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What is claimed is:

- 1 1. A fluid injector comprising:
 - 2 a base including a chamber and a surface;
 - 3 a first through hole, communicating with the chamber,
 - 4 disposed in the base;
 - 5 a bubble generator disposed on the surface near the first
 - 6 through hole outside the chamber of the base;
 - 7 a passivation layer disposed on the surface; and
 - 8 a metal layer, defining a second through hole, disposed
 - 9 on the passivation layer outside the chamber, wherein the
 - 10 second through hole communicates with the first through hole.
- 1 2. The fluid injector as claimed in claim 1, wherein
- 2 the bubble generator comprises:
 - 3 a first heater, disposed on the surface outside the
 - 4 chamber, for generating a first bubble in the chamber; and
 - 5 a second heater, disposed on the surface outside the
 - 6 chamber, for generating a second bubble in the chamber to
 - 7 inject fluid in the chamber, wherein the first heater and the
 - 8 second heater are located at opposite sides of the first
 - 9 through hole.
- 1 3. The fluid injector as claimed in claim 1, wherein
- 2 the bubble generator includes a heater.
- 1 4. The fluid injector as claimed in claim 1, wherein
- 2 the metal layer includes a plurality of fins on a surface away
- 3 from the base to assist the metal layer in heat dissipation.
- 1 5. The fluid injector as claimed in claim 1, wherein
- 2 the diameter of one end, communicating with the first through
- 3 hole, of the second hole is substantially larger than that
- 4 of the other end of the second through hole.
- 1 6. The fluid injector as claimed in claim 1, further
- 2 comprising:

3 an adhesion layer, disposed between the base and the
4 metal layer, for assisting in adhesion between the metal layer
5 and the base.

1 7. The fluid injector as claimed in claim 6, wherein
2 the adhesion layer is Al.

1 8. The fluid injector as claimed in claim 1, wherein
2 the metal layer is Ni-Co alloy.

1 9. The fluid injector as claimed in claim 1, wherein
2 the metal layer is Au.

1 10. The fluid injector as claimed in claim 1, wherein
2 the metal layer is Au-Co alloy.

1 11. The fluid injector as claimed in claim 1, wherein
2 the base comprises:

3 a silicon substrate; and

4 a structural layer disposed on the silicon substrate to
5 form the chamber therebetween.

1 12. The fluid injector as claimed in claim 11, wherein
2 the structural layer defines a third through hole, and the
3 passivation layer defines a fourth through hole corresponding
4 to the third through hole, and the metal layer is directly
5 connected with the silicon substrate via the fourth through
6 hole.

1 13. The fluid injector as claimed in claim 11, wherein
2 the structural layer defines a third through hole, and the
3 passivation layer defines a fourth through hole corresponding
4 to the third through hole, and the base further comprises:

5 an adhesion layer, disposed on the structural layer and
6 located between the passivation layer and the structural
7 layer, abutting the silicon substrate via the third through
8 hole and abutting the metal layer via the fourth hole to assist
9 in adhesion between the metal layer and the silicon substrate.

1 14. The fluid injector as claimed in claim 13, wherein
2 the adhesion layer is Al.

1 15. A method, for manufacturing a fluid injector,
2 comprising:

3 providing a wafer;

4 forming a structural layer on the wafer and defining a
5 chamber between the wafer and the structural layer;

6 disposing a bubble generator on the structural layer,
7 wherein the bubble generator is located outside the chamber;

8 forming a passivation layer on the structural layer;

9 forming a metal layer on the passivation layer; and

10 forming a first through hole on the structural layer,
11 wherein the first through hole communicates with the chamber.

1 16. The method as claimed in claim 15, wherein the
2 bubble generator is covered by the metal layer.

1 17. The method as claimed in claim 15, wherein the metal
2 layer is coated on the passivation layer by electroforming.

1 18. The method as claimed in claim 15, wherein the metal
2 layer is coated on the passivation layer by electroless
3 plating.

1 19. The method as claimed in claim 15, wherein the metal
2 layer is coated on the passivation layer by physical vapor
3 deposition.

1 20. The method as claimed in claim 15, wherein the metal
2 layer is coated on the passivation layer by chemical vapor
3 deposition.

1 21. The method as claimed in claim 15, wherein the metal
2 layer includes a plurality of fins on a surface away from the
3 base to assist the metal layer in heat dissipation.

1 22. The method as claimed in claim 15, further
2 comprising:

3 forming a second through hole in the metal layer, wherein
4 the second through hole communicates with the first through
5 hole.

1 23. The method as claimed in claim 22, wherein the
2 diameter of one end, communicating with the first through
3 hole, of the second hole is substantially larger than that
4 of the other end of the second through hole.

1 24. The method as claimed in claim 15, wherein an
2 adhesive layer is formed on the structural layer before the
3 metal layer is formed on the structural layer so as to assist
4 adhesion between the metal layer and the wafer.

1 25. The method as claimed in claim 15, wherein the
2 structural layer defines a third through hole, and the
3 passivation layer defines a fourth through hole corresponding
4 to the third through hole, and the metal layer is directly
5 connected with the wafer via the fourth through hole.

1 26. The method as claimed in claim 15, wherein a third
2 through hole is formed in the structural layer after the
3 structural layer is formed on the wafer, and an adhesion layer
4 is formed on the structural layer to be connected with the
5 wafer via the third through hole.

1 27. The method as claimed in claim 15, wherein the metal
2 layer is Ni-Co alloy.

1 28. The method as claimed in claim 15, wherein the metal
2 layer is Au.

1 29. The method as claimed in claim 15, wherein the metal
2 layer is Au-Co alloy.

1 30. The method as claimed in claim 15, wherein the
2 structural layer is silicon nitride.

1 31. A fluid injector comprising:

2 a base including a chamber and a surface;

3 a first through hole, communicating with the chamber,
4 disposed in the base;

5 a bubble generator disposed on the surface near the first
6 through hole outside the chamber of the base;

7 a passivation layer disposed on the surface; and

8 a metal layer disposed on the passivation layer outside
9 the chamber to dissipate heat.

1 32. The fluid injector as claimed in claim 31, wherein
2 the metal layer includes a plurality of fins on a surface away
3 from the base to assist the metal layer in heat dissipation.

1 33. The fluid injector as claimed in claim 31, further
2 comprising:

3 an adhesion layer, disposed between the base and the
4 metal layer, to assist in adhesion between the metal layer
5 and the base.

1 34. The fluid injector as claimed in claim 33, wherein
2 the adhesion layer is conductive material.

1 35. The fluid injector as claimed in claim 31, wherein
2 the metal layer is Ni-Co alloy.

1 36. The fluid injector as claimed in claim 31, wherein
2 the metal layer is Au.

1 37. The fluid injector as claimed in claim 31, wherein
2 the metal layer is Au-Co alloy.

1 38. The fluid injector as claimed in claim 31, wherein
2 the base comprises:

3 a silicon substrate; and

4 a structural layer disposed on the silicon substrate to
5 form the chamber therebetween.

1 39. The fluid injector as claimed in claim 38, wherein
2 the structural layer defines a second through hole, and the
3 passivation layer defines a third through hole corresponding
4 to the second through hole, and the metal layer is directly

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5 connected with the silicon substrate via the third through
6 hole.

1 40. The fluid injector as claimed in claim 38, wherein
2 the structural layer defines a second through hole, and the
3 passivation layer defines a third through hole corresponding
4 to the second through hole, and the base further comprises:

5 an adhesion layer, disposed on the structural layer and
6 located between the passivation layer and the structural
7 layer, abutting the silicon substrate via the second through
8 hole and abutting the metal layer via the third hole to assist
9 in adhesion between the metal layer and the silicon substrate.